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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,683	10/29/2003	Gary L. Heiman	STAN/31	5261
26875	7590	11/21/2006		
WOOD, HERRON & EVANS, LLP 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			EXAMINER BEFUMO, JENNA LEIGH	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/696,683

**Applicant(s)**

HEIMAN, GARY L.

**Examiner**

Jenna-Leigh Befumo

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-8,10-14,16,33 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,10-12,14,16,33 and 35-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Amendment submitted on August 17, 2006, has been entered. Claims 2, 4, 9, 15, 17 – 32, and 34 have been cancelled. Claims 1, 3, 6 – 8, 10, 12, 13, 16, and 33 have been amended and claims 35 – 37 have been added. Therefore, the pending claims are 1, 3, 5 – 8, 10 – 15, 16, 33, and 35 – 37. Claims 5 – 8 and 13 are withdrawn from consideration as being drawn to a nonelected invention.
2. The rejections to claims 2, 4, 9, and 15 are rendered moot by the cancellation of those claims.
3. The 35 USC 102 rejection over Covelli (2003/0092339 A1) is withdrawn since Covelli fails to teach using multifilament yarns.
4. The 35 USC 102 rejection based on Barbeau et al. (5,299,602) is withdrawn because Barbeau et al. fails to teach using spun yarns in the woven fabric.
5. The 35 USC 102 rejection based on Collier (5,487,936) is withdrawn since Collier only explicitly teaches using a 2 x 2 twill. However, a 35 USC 103 rejection based on Collier is set forth below.
6. Finally, it is noted that in section 8 of the previous Office Action, the heading stated that both claims 13 and 33 were rejected. However, claim 13 is withdrawn from consideration. The heading should have only listed claim 33 as being rejected.

### ***Information Disclosure Statement***

7. The information disclosure statement (IDS) submitted on February 2, 2004 was considered by the Examiner prior to the first Office Action. However, the signed copy was not properly initialed. Therefore, a new initialed and signed copy is included herewith.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1, 3, 10 – 12, 14, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim recites that  $x \neq y$  in the  $x/y$  float pattern. However, the disclosure does not teach the concept of excluding weave patterns with an equal number of floats in both the warp and weft directions. In fact, the disclosure teaches that fabrics having a 2 x 2 float pattern can be used in the invention. And while the disclosure does teach that 2/1, 3/1, or 4/1 float patterns can be used in the invention, which have a float pattern where  $x \neq y$ , this does not provide sufficient support for the negative limitation excluding fabric structures where  $x \neq y$  in the float pattern. Instead, the disclosure only provides support for claims which positively claim a specific float structure wherein  $x \neq y$  that is taught in the specification.

***Claim Rejections - 35 USC § 102***

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1, 3, 10 – 12, 14, 16, 33, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Love, III et al. (2004/0229538 A1).

Love, III et al. discloses a woven fabric made from at least 50% of synthetic fiber components (abstract). The woven fabric can include synthetic fibers, blends of two or more

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synthetic fibers, and blends of synthetic and natural fibers (paragraph 14). The yarns can be made from spun or filament yarns, or combinations thereof (paragraph 14). Further, the fabric can have a weave construction including plain weave, satin weave, or twill weave fabrics (paragraph 15). The examples teach combining polyester spun yarns in the warp direction with polyester filament yarns in the filling direction (paragraph 58). Also, the spun yarns can include a blend of natural staple fibers with synthetic staple fibers (paragraph 165). Further, the examples include fabrics made with a 2 x 1 twill weave construction (paragraph 165). Thus, claims 1, 3, 10 – 12, 14, 16, 33, and 35 are anticipated.

***Claim Rejections - 35 USC § 103***

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Love, III et al.

The features of Love, III et al. have been set forth above. While Love, III et al. has disclosed that twill weaves can be used to produce the woven fabric, including an example with a 2 x 1 twill structure, Love, III et al. fails to teach using a 3 x 1 or 4 x 1 twill weave structure. However, It would have been obvious to one having ordinary skill in the art to choose a 3 x 1 or 4 x 1, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. Further, one of ordinary skill in the art would be motivated to increase the float length to a 3 x 1 or 4 x 1 float structure to have longer floats on the surface of the fabric and produce a smoother surface structure in the finished product. Thus, claims 36 and 37 are rejected.

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14. Claims 1, 3, 9, 10, 12, 14, 16, 33, and 35 – 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collier in view of Lovingood (2003/0190853).

The features of Collier and Lovingood have been set forth in the previous Office Action. While Collier discloses a multicolor woven 2 x 2 twill fabric comprising spun warp yarns and synthetic multifilament filling yarns, Collier fails to teach using a 2 x 1, 3 x 1, or 4 x 1 twill structure.

Lovingood is drawn to woven fabrics made from warp and weft yarns of different composition which dye to produce a desired visual pattern (abstract). Lovingood discloses that the woven fabric can be produced with various weave patterns including 2 x 1 twill and 3 x 1 twill fabrics (paragraph 29). Therefore, it would have been obvious to one having ordinary skill in the art to use a 2 x 1 or 3 x 1 twill structure as disclosed by Lovingood, to produce a different visual effect in the fabric of Collier since Collier discloses that different weave patterns can be used to create different designs in the fabric. Therefore, claims 1, 3, 9, 10, 12, 14, 16, 33, and 35 are rejected.

Further, it would have been obvious to one having ordinary skill in the art to choose a 2 x 1, 3 x 1, or 4 x 1 twill weave pattern, since it has been held to be within the general skill of a worker in the art to select a known material (i.e., weave pattern) on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Further, one of ordinary skill in the art would be motivated to increase the float length to a 3 x 1 or 4 x 1 float structure to have longer floats on the surface of the fabric and produce a smoother surface structure in the finished product. Thus, claims 36 and 37 are rejected.

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15. Claims 1, 3, 9, 10, 14, 16, 33, and 35 – 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heiman in view of Fairchild's Dictionary of Textiles (Tortora, Phyllis. 7<sup>th</sup> edition. Fairchild Publications, New York. 2003. p 596).

The features of Heiman and Fairchild's Dictionary of Textiles have been set forth in the previous Office Action. Claims 1, 3, 9, 10, 14, 16, and 33 and newly added claim 35 are rejected for the reasons of record.

However, the previous rejection fails to address using a 3 x 1 or 4 x 1 twill structure. Twill fabrics are commonly known woven fabric structures used to produce strong, durable fabrics (Fairchild's). Thus, it would have been obvious to one having ordinary skill in the art to substitute a known twill weave structure for the plain weave structure disclosed by Heiman since twill weaves. Further, it would have been obvious to one having ordinary skill in the art to choose a 2 x 1, 3 x 1, or 4 x 1 twill weave pattern, since it has been held to be within the general skill of a worker in the art to select a known material (i.e., weave pattern) on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Further, one of ordinary skill in the art would be motivated to increase the float length to a 3 x 1 or 4 x 1 float structure to have longer floats on the surface of the fabric and produce a smoother surface structure in the finished product. Thus, claims 36 and 37 are rejected.

#### ***Double Patenting***

16. Claims 1, 3, 9, 10, 14, 16, 33, and 35 – 37 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 21 of U.S. Patent No. 5,495,874 in view of Fairchild's Dictionary of Textiles for the reasons of record.

#### ***Response to Arguments***

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17. Applicant's arguments filed August 17, 2006 have been fully considered but they are not persuasive. The applicant argues that it would not have been obvious to modify the weave structure of Collier to an uneven twill structure because there is no suggestion of desirability for the combination (response, pages 9 – 11). Specifically, the applicant argues that Collier requires an even float pattern to produce the multi-colored appearance disclosed by Collier. However, Collier suggests that different weave patterns can be used to produce the desired visual appearance (column 4, lines 11 – 12). Thus, the applicant does not exclude using weave patterns with uneven float patterns. Further, Collier is combined with Lovingood which is also drawn to producing visually appealing woven fabric by combining yarns which dye differently to create the design pattern. Lovingood specifically discloses that various known weave structures including 2 x 1 and 3 x 1 twill patterns can be used without limitation to produce the dyed, woven fabric (paragraph 29). Thus, Lovingood provides motivation and a suggestion that using different twill weave structure in the multicolored fabric of Collier would be desirable. Thus, the rejection is maintained.

18. Finally, the applicant argues that Heiman fails to suggest using float patterns in the woven fabric and provides no motivation to use weave structures with float patterns (response, pages 11 – 12). True, Heiman teaches that 1 x 1 plain weave fabrics are preferred. However, Heiman provides very little discussion with regard to the weave structure of the fabric. And while the 1 x 1 plain weave structure is preferred, Heiman does not teach or suggest other weave structures *can't* be used as the weave structure of the fabric. Further, as set forth by Fairchild's, twill weaves are commonly known and provide improved properties with regard to strength and durability. Thus, Fairchild's provides the suggestion and motivation to use a twill weave structure to improve the durability and strength of the woven fabric taught by Heiman.



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In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Thus, the rejection is maintained.

19. The Applicant argues that the double patenting rejection should be withdrawn because there is not sufficient evidence to choose the twill weave structure (response, pages 12 – 13). However, as set forth above, there is sufficient motivation in the prior art to use a twill weave structure in the woven fabric claimed by Heiman. Thus, the rejections are maintained.

### ***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jlb  
October 31, 2006



JENNA BEFUMO  
PRIMARY EXAMINER